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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,618	03/18/2004	Yuichi Taguchi	16869B-102700US	7877

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EXAMINER

MAHMOOD, REZWANUL

ART UNIT	PAPER NUMBER
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2164

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/804,618	Applicant(s) TAGUCHI, YUICHI	
	Examiner Rezwanul Mahmood	Art Unit 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>08/26/05, 3/18/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because they fail to show necessary textual labels of features or symbols in Figure 3 as described in the specification. A descriptive textual label for each numbered element in these figures would be needed to better understand these figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be labeled in the drawing. Optionally, the applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.84(n)(o), recited below:

"(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.

(o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible."

Specification

2. The disclosure is objected to because of the following informalities:
3. In Paragraph 42 line 7, the application serial number is missing.
4. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasmirsky (US Publication 2004/0193740) in view of Nilsson (US Publication 2005/0188220).

7. With respect to claim 1, Kasmirsky discloses a storage system, comprising:
a host configured to receive a data file from a client, the host including a data management rule set program that is operable to associate a management rule to the data file received from the client (Kasmirsky: Paragraph 19, lines 1-10; Figure 5);

a first storage subsystem configured to receive and store the data file from the host, the storage system including a storage controller and a plurality of storage volumes (Paragraph 18, lines 1-6; Figure 3; Figure 5);

However, does not disclose expressly:

a data protection server including a data protection management program that cooperates with the first storage subsystem to protect the data file stored in the first storage subsystem.

The Nilsson reference, however, discloses a data protection server including a data protection management program that cooperates with a storage subsystem to

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protect data (Nilsson: Paragraph 21, lines 9-19; Figure 1-2B).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added the feature of a data protection server including data protection management program to cooperate with the data stored in the storage subsystems.

The suggestion or motivation or doing so would be to provide an arrangement and a method through which end user personal data can be protected to a high extent (Nilsson: Paragraph 7, lines 2-4).

Therefore, it would have been obvious to have added Kasmirsky with Nilsson for the benefit of data protection.

8. Claims 2-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasmirsky (US Publication 2004/0193740) in view of Nilsson (US Publication 2005/0188220) as applied to claim 1 above, and further in view of Zahavi (US Publication 2005/0086646).

9. With respect to claim 2, Kasmirsky in view of Nilsson discloses the storage system of claim 1, however, does not disclose expressly wherein the management rule is inserted into a header of the data file.

The Zahavi reference, however, discloses each data file including a header block that contains the description and order of the periodic data (Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added the feature of inserting management rule into the header of a data file.

The suggestion or motivation of doing so would be to provide a data management method or apparatus for implementation in an automated system to monitor and manage status, performance and configuration data for a plurality of networked storage components (Zahavi: Paragraph 10, lines 1-5).

Therefore, it would have been obvious to combine Zahavi with Kasmirsky and Nilsson for the benefit of monitoring the status, performance, and configuration of network storage components.

10. With respect to claim 3, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 2, wherein the management rule relates to a retention period of the data file (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8).

11. With respect to claim 4, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 1, wherein the first storage subsystem further comprises a data protection program that cooperates with the data protection management program of the data protection server to protect the data file stored in the first storage subsystem, wherein the management rule is attached to the data file and transmitted to the first storage subsystem with a data content of the data file

(Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Nilsson: Paragraph 21, lines 9-19; Figure 1-2B).

12. With respect to claim 5, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 1, where the data file is stored in a first storage volume of the first storage subsystem, the storage system further comprising:

a data relocation server configured to manage relocation of the data file to a second storage volume from the first storage volume, the data relocation server including a data relocation management program and a storage information table including information about storage subsystems and storage media associated with the storage system, wherein the data relocation management program initiates the relocation of the data file to the second storage volume by looking up the storage information table for a suitable storage location for the second storage volume

(Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Figure 3-5; In Kasmirsky Figure 3, the storage manager can act as a data relocation server which inherently will have a data relocation management program to relocate data from one storage to another. Prior to moving data file from one storage to another, the storage manager inherently looks up information regarding a suitable relocation location, this information inherently can be in the form of an information table).

13. With respect to claim 6, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 5, wherein the second storage volume is

located in a second storage subsystem of the storage system (Kasmirsky: Figure 3).

14. With respect to claim 7, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 1, wherein the data relocation server and the host are different devices (In Kasmirsky Figure 3 and Nilsson figure 1, we see the components to be different devices).

15. With respect to claim 8, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 1, wherein the data protection server and the host are different devices (In Kasmirsky Figure 3 and Nilsson figure 1, we see the components to be different devices).

16. With respect to claim 9, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the storage system of claim 1, wherein the data management rule set program of the host inserts a plurality of management rules into a header of the data file, the management rules relating to information about a retention period and relocation instructions of the data file (Kasmirsky: Paragraph 19, lines 1-10; Figure 3; Figure 5; Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4).

17. With respect to claim 10, Kasmirsky in view of Nilsson and in further view of Zahavi discloses a management server provided in a storage system, the storage system including one or more hosts and one or more storage subsystems, the

management server comprising:

- a memory to store data (Kasmirsky: Figure 3; Nilsson: Figure 1);
- a processor to process data (Kasmirsky: Figure 3; Nilsson: Figure 1);
- a network interface to link with one or more computers of the storage system (Kasmirsky: Figure 3; Nilsson: Figure 1); and
- a first management program to attach a management rule to a data file to be stored in a storage subsystem of the storage system, the management rule relating to a retention period or relocation information of the data file (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Figure 5),
wherein the data file and the management rule are stored in a storage volume of the storage subsystem (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8).

18. With respect to claim 11, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the server of claim 10, wherein the server is a host that is configured to receive data files from a client of the storage system and send read and write requests to the storage subsystem (Kasmirsky: Figure 3).

19. With respect to claim 12, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the server of claim 10, wherein the management rule is inserted into a header of the data file (Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4), the server further comprising :

- a second management program that cooperates with a file system to store the

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data file in the storage subsystem (Kasmirsky: Figure 3 shows a second storage which inherently can have a second management program for storing data file).

20. With respect to claim 13, Kasmirsky in view of Nilsson and in further view of Zahavi discloses a management server provided in a storage system, the storage system including one or more hosts and one or more storage subsystems, the management server comprising:

- a memory to store data (Kasmirsky: Figure 3; Nilsson: Figure 1);

- a processor to process data (Kasmirsky: Figure 3; Nilsson: Figure 1);

- a network interface to link with one or more computers of the storage system

(Kasmirsky: Figure 3; Nilsson: Figure 1); and

- a first management program operable to access a header of a data file and manage the data file according to a management rule inserted in the header, the management rule relating to a retention period or relocation instructions of the data file (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Figure 5; Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4).

21. With respect to claim 14, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the server of claim 13, wherein the server is a data protection server and the first management program is a data protection management program (Nilsson: Paragraph 21, lines 9-19; Figure 1-2B).

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22. With respect to claim 15, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the server of claim 13, wherein the server is a data relocation server and the first management program is a data relocation management program (Here the storage manager in Kasmirsky acts as a relocation server which inherently contains a relocation management program).

23. With respect to claim 16, Kasmirsky in view of Nilsson and in further view of Zahavi discloses a method for managing a data file stored in a storage system, the storage system including one or more client, one or more hosts, one or more storage subsystems, the method comprising:

receiving a data file including a header and a data content (Kasmirsky:

Paragraph 19, lines 1-10);

attaching a management rule to the data file (Kasmirsky: Figure 5);

storing the data file and the management rule at a first storage location in a first storage subsystem, the management rule relating to retention or relocation information of the data file (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Figure 3; Figure 5); and

notifying a management program about the data file (Figure 5).

24. With respect to claim 17, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the method of claim 16, further comprising:

accessing the management rule attached to the data file (Kasmirsky: Paragraph

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19, lines 1-10); and

performing a management act relating to the data file according to the management rule (paragraph 18, lines 1-6),

wherein the management rule is inserted into a header of the data file (Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4).

25. With respect to claim 18, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the method of claim 17, wherein the management rule is accessed by a data protection management program provided in a data protection server, the management act being an act related to preventing the data file stored in the first storage location from being modified or deleted (Nilsson: Paragraph 21, lines 9-19; Figure 1-2B).

26. With respect to claim 19, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the method of claim 17, wherein the management rule is accessed by a data relocation server, and the management act relates to relocating the data file to a second storage location (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10, lines 1-8; Figure 5).

27. With respect to claim 20, Kasmirsky in view of Nilsson and in further view of Zahavi discloses the method of claim 17, wherein the management rule is inserted into a header of the data file by a host (Kasmirsky: Paragraph 9, lines 4-24; Paragraph 10,

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lines 1-8; Zahavi: Paragraph 48, lines 1-4; Paragraph 49, lines 1-4).

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Greenblatt reference (US Publication 2003/0115204) teaches about data management server and storage systems. The Gajjar reference (US Publication 2002/0174306) teaches about policy based storage management. The Umebayashi reference (US Publication 2004/0010701) teaches about a data protection program. The Trimmer reference (US Publication 2004/0044863) teaches about a data protection program. The Prahlad reference (US Publication 2006/0010154) teaches about a system and method performing storage operations using network attached storages.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rezwanul Mahmood whose telephone number is (571)272-5625. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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